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PERCEPTION OF HUNTING, GATHERING AND FISHING TECHNIQUES OF THE BAKOLA OF THE COASTAL REGION, SOUTHERN CAMEROON

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ABSTRACT While the BaKola (sin. Nkola) are known as one of the “Pygmy” groups in the forest regions of central Africa, their subsistence activities have not yet been described in details, unlike other groups of “Pygmies” in the central African region. This paper is thus to present the basic data on their tools and techniques for hunting, gathering and fishing, and on the social representations of these techniques, and to examines the reasons why up to the 21st century they have been maintaining their distinctive lifestyle as hunter-gatherers, through analyzing their roles played and the symbolism represented by their activities in the multi-ethnic local community of the coastal region of southern Cameroon. In particular, it demonstrates that their trade, gift-exchanges, important rituals, and other aspects of their social and economic life are based on the three major traditional activities, hunting, gathering and fishing.

Key Words: Bakola; Hunting; Gathering; Fishing; Techniques; Tools; Socio-cultural role; Woman's role.

INTRODUCTION

This article is a continuation of a series of surveys carried out at Bakola (one of the so-called “Pygmy” groups) camps in various locations of the Ocean Division from 1994 to 2002. The data used in this article were mainly obtained from the interviews with adult men and women, and heads of camps individually, as well as from organized talks with groups of people according to age groups, sex and locations. The interviews and talks made it possible to gather a very wide range of information on the Bakola's lifestyle, beliefs, community life, dances, traditional pharmacopoeia and social representations, which are described and analyzed below.

In numerical terms, the Bakola of the coastal region constitute the second largest “Pygmy” group, after the Baka in southeastern region, in Cameroon. They number about 5,000 and spread out in the reserves and forest massifs located between the southern borders of the Nyong-et-Kell division, the Mvilla and the Ntem Valley divisions. The great majority of their population (3500 inhabitants), however, lives in the Ocean division. They still live mostly by hunting and gathering, though recently fishing and agriculture were introduced and slowly adopted into their lifestyle. Two thirds of the Bakola are settled along the roadside, or in the bush about one or two hours of trek from Bantu

farmers' villages. Those who live along motorways lead a lifestyle similar to those living in the forest. Increased interactions with the neighboring Bantu farmers are somehow changing their behaviors and way of life, motivating their zeal for farm work.

The Bakola of the coastal region, just like their neighboring Bantu villagers, are slowly but steadily transforming the forest which is their supplier of foodstuffs (bushmeat, in particular) and other cultural values, a dwelling space for guardian spirits of the dead, through their hunting, gathering, fishing, agriculture, and other activities in the forest. Each of these activities makes use of specific techniques and instruments. In spite of the large size of the forest and the abundance (in principle) of foodstuffs, bush meat and fish, in particular, the Bakola of the coastal region sometimes find it difficult to feed themselves in the forest.

The semi-sedentarization of the Bakola settlements has been promoted during the past five decades with its immediate corollaries such as introduction of agriculture and solid durable houses, and the implantation of western civilization (school education, Christian religion, NGO activities, etc.). There are also tendencies toward decline of wild resources (bushmeat, in particular) due to the gradual destruction of the dense forest, increased contacts with Bantu farmers, and their own will to become autonomous, which is encouraged by the State and NGOs. In spite of these changes, they have not, until now, fundamentally altered their way of hunting and gathering life, and symbolism accruing from their techniques and tools used for their daily activities.

With their traditional techniques and old-fashioned instruments, it is not easy to exploit sufficient amount of forest resources necessary for their life. Nevertheless, the socio-cultural and economic roles and social representations (perception) of hunting, gathering and fishing with their tools and techniques have still some roles to play, and they need to be preserved in order to perpetuate their unique culture from generation to generation. It is also necessary to develop and improve the techniques and instruments, and thereby to attain better, more reliable quantitative and qualitative output. In this context, this article aims to describe and analyze their livelihood activities, and their socio-cultural and economic roles, paying special attentions to their importance, their regularity of use, and their contribution to their livelihood, as well as to the social aspects such as the sexual division of labor in the Bakola society.

NATURAL RESOURCE EXPLOITATION

I. Hunting

The Bakola live in an environment of large, dense, humid, and in some part semi-deciduous, forest. The Campo National Park is dominated by tall trees (40 to 60 m), below which is thick undergrowth. The climate is of typical of

the south Cameroon, with two rainy seasons (a long one from mid August to mid November and a short one from mid March to mid June). With rich forest faunal resource in the reserve, hunting remains the backbone of the traditional socio-economic activity and continues to play an important economic role to their present life, in particular to the trade with other groups and outside society. Hunting is all the more important because it is even practiced actively by women; especially in net hunting, women play an important role either by themselves or together with men. Hunting tools and techniques used by the Bakola are the same as those used by the Baka of southeastern Cameroon and the Aka of Lobaye, Central African Republic (see Demesse, 1980; Bahuchet, 1985).

The Bakola of the coastal region still actively carry out hunting, gathering, and trade their products by barter with the Mvae, the Yassa, the Mabea, the Boulou, the Ngoumba, the Fang, the Bassa, the Bakoko, the Evouzok, and other farming groups in the region. While the Aka of Lobaye (Bahuchet, 1972; 1979) obtain the bulk of the agricultural food from the farming villagers, almost all the Bakola of the coastal region practice food and cash crop cultivation at varying degrees, though hunting is predominant in their subsistence activities. In effect, it is through hunting that the Bakola acquire the most vital element of their subsistence, i.e. meat. It is therefore not an exaggeration to say that all the Bakola are born hunters. The nature of their relationships with their Bantu neighbors also depends on hunting and varies from one group to another. As such, the importance of hunting to their life and the economic differences among various groups are more or less great. I will describe below various hunting tools used and techniques employed by the Bakola.

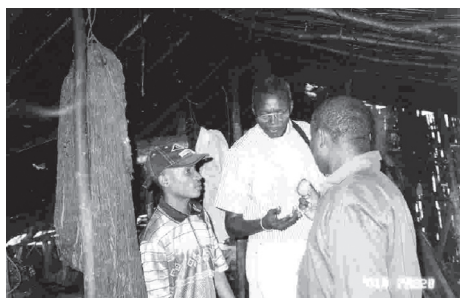
1. Hunting Tools

The Bakola of the coastal region use a wide variety of hunting tools. All adult Bakola men know how to manufacture and use the different hunting tools. However, these tools are not used equally, nor in the same manner. In some areas, younger generations ignore certain traditional tools and instead prefer modern weapons like guns that are more efficient. Because there are such variations in the use of hunting tools and techniques, we think it necessary to first classify them according to the frequency of use, such as "frequent," "occasional," "rare," "disappeared," and according to the importance, such as "major," "secondary" (see Table 1). Such classification is also applied to the products obtained from hunting, gathering, fishing, farming, barter and manufacturing, and to those consumed daily, weekly, monthly or seasonally by the Bakola.

Through the description based on such a classification, it is made clear that some tools are more frequently used than others, some products have simply gone out of circulation and have become mere objects of memory that these were formerly "used and manufactured by grand parents."

Table 1. Classification of Hunting Tools by Frequency of Use.

Frequent	Occasional	Rare	Disappeared
net (<i>wado</i>)	gun (<i>nyembo</i>)	reinforced net	? (<i>assegai</i>)
spear (<i>kuang</i>)	bait (<i>nzuana</i>)		liana (<i>mbou /nluong</i>)
dog (<i>mbpuing</i>)	crossbow (<i>mbanzi</i>)		
machete (<i>nkiuala</i>)			
trap stick (<i>miassoer</i>)			
club (<i>keki</i>)			
cable snare (<i>waya</i>)			

**Fig. 1.** Visit to a Bakola (Bilolo) camp. Hunting nets are hung on the left side, waiting for the appropriate season. (Photograph by Ngima, 2001).

(1) *Hunting Nets (wado)*

It is one of the most important traditional hunting tools, and found among all the Bakola groups in the coastal region. The net is made of the fibers obtained from the forest. Every adult Nkola (over 20 years of age) is expected to own his hunting net, but it is difficult and almost impossible for all the adult man to have his own net, because both the materials and the time of making a net are limited. Using hunting nets is usually associated with various kinds of magical and religious ceremonies, before and after hunting. A Nkola knows that before taking off for hunting, he should not carry his net anywhere nor anyway; he should fold it in a certain way. All these cautious treatment takes place again after the hunting in order to ensure the safety of their life.

(2) *Spear (kuang)*

Spears are also frequently used by the Bakola. Unlike the net that is manufactured only by some elderly specialists (there are camps without a person who can make a net), the spear can be possessed by any man over the age of ten. At the age of about ten, almost all young Bakola boys know how to use a spear; they use a spear-like tool in their play “guien,” even before that age, which functions as a preparatory stage for using a spear. It is therefore not surprising to find as many as four spears of various sizes in a house where there are four males of over ten years of age. A Nkola boy normally carries

with him a machete and a spear whenever he goes to the bush. Married women also carry the spears of their husbands whenever they enter into the forest by themselves to gather wild food, or to hunt small animals like Gambian rats. Spear hunting is practiced individually, even on the spot when they encounter with a target.

(3) *Dog (mbpuing)*

It is the most valuable domestic animal in the Bakola life. Like a spear (*kuang*), they always accompany a dog when entering into the forest, regardless of their destination (for hunting, gathering, and going to the field, etc.). It is common that two or three dogs are kept in a household, and they are used indiscriminately by men, women and children of the household. Dogs are particularly effective for tracing a wild animal in the forest, holding a larger animal at bay while the hunter aims at spearing it (bushpigs were once hunted in this way), or capturing smaller animals like porcupines and forest rats by themselves.

(4) *Machete (nkiuala)*

Like the three tools described above, a machete is also a very common hunting tool, possessed by almost all the inhabitants of a camp. Generally, the Bakola buy it from the nearest commercial centre, with the cash obtained from selling his game. Also, they acquire a second-hand and worn-out one from a villager, in exchange for work done on the farm or through exchange in kind or for cash obtained from the exchange. Each couple possesses at least two; that of the husband is usually better handled, given his tough and delicate activities on the farm and in the forest.

A machete is used in various ways by both males and females. For no reason may a man or woman venture into the forest without a machete. It is used to ward off danger, kill small animals they may encounter with, dig pits to obtain edible roots and tubers, and to cut sticks for traps, cut firewood, butcher an animal into pieces, trim palm trunks to tap wine, extract honey, clear the field for farming, fell smaller trees, etc. A machete is therefore a multi-purpose tool without which the Bakola cannot live in the forest.

2. *Hunting Technique*

The Bakola currently practice five different hunting techniques, as described below in the order of importance.

(1) *Trapping*

The Bakola traps are composed of nine major elements; a trap-stick, a steel cable, a hook, a pit, a snare, a release, a catch, a fixed part (see the photographs below) and dead leaves to hide the pit (*koch*). Trapping with snare is done throughout the year, but more intensively during the rainy season when net hunting is not practiced. There are several types of snare traps for mammals and birds. All the snare traps are set almost in the same way. The traditional

method is: the hunter takes a cable (*waya*) and ties it at the end of the trap-stick. He digs a pit on the animals' recognized path. On one end of the cable, he ties the catch, and a little lower, makes a slipknot. He then sticks the trap-stick into the ground (about 20 cm deep), does the same for the hook, just before the pit. He then bends the trap-stick in a semi-circle towards the pit, introduces the catch into the fork of the hook, blocks it with a release, places the knot, and then finally covers the pit with dead leaves. When an animal comes to pass, it places its leg into the pit without realizing that there is a trap; the system triggers off automatically under its leg, the knot tightens and raises the prey which will wriggle to its last breadth. A similar trap is used for catching rodents on the neck, though the slipknot is vertical with a bait on the other side.

Trapping is carried out usually by one man. Each Nkola aged more than 15 years old has on average twenty traps set in the forest, around the crop fields or in other areas suitable for trapping. Traps with bait are mainly set by youths near the forest camps. Bakola youths use numerous strong-smelling wild fruits, such as *lesungie*, *buwe*, *ngegi*, etc. (all unidentified.), as bait. The Bakola and the Bantu also eat these fruits. Many traps are set under the trees that produce



(1) A line of traps around the crop fields to catch porcupines, grass-cutter and rats.



(2) Another collar trap set with a bait on both sides to attract mammals, birds and snakes.



(3) Setting traps for monkeys and arboreal animals.



(4) Setting a collar trap in forest of Yandiboto.

Fig. 2. Setting traps in the forest. (Photographs by Ngima, 2001).

these fruits, and that are often visited by various animals, rodents in particular. The crop fields are fenced to protect crops (cassava, gourds, groundnuts, etc.) from damages by wild animals, which are often caught with the traps set around the fence. Noose-traps without bait are mostly set by adults in areas at some distance from camps and the fields.

It is mainly during the rainy season that bait traps are set, when animal traces (in particular foot prints left on the ground) are more visible. However, bait traps are set more or less throughout the year, even when the fruits mentioned above are out of season. There are generally traps in the forest all year around, which can provide the people with animal proteins at any time of the year. The hunters often change the sites of traps, when no animals are caught with the traps for some period. When traps are set in the forest, the Bakola go to the forest regularly, every three to four days, to visit them, slaughter the trapped animals, check the animals that have escaped the traps, and set the traps again. All these trapping techniques are also known to and practiced by the neighboring Mvae and Boulou farmers who also practice gun hunting with their own guns and some fishing.

Bellow (Table 2) is a list of the game killed, either frequently, occasionally or rarely, with trapping. This is by no means an exhaustive list, but includes animals that were recorded during our stay in the camps of Nazareth, Biyengue, Mimbosso, Boussibilika, Ngoulo, Bissono, Akole, Bingoh, Mefane and in the Bipindi-Kribi, Bipindi-Bella, Bipindi-Mbikiliki, Lolodorf-Eseka areas during the long and short rainy seasons.

Hunting for larger game has become rare today. Especially the elephants are almost extinct in the Campo and Kienke forest reserves. They hunt bushpigs only when someone finds their traces in the forest. They can spend two to three days in the forest chasing the bushpigs. According to a legend narrated by the Bakola, bushpigs are always accompanied by a very short man of about 50 cm tall, called *Ndtoungou ba Ngu*, who signals the presence of hunters around and let them flee from human predation. It is said that this man serves as a forerunner of the bushpigs' herd, in a zone full of traps set by men. The animals are therefore obliged to move in a single file, placing their foots where this guide places his.

Birds are also hunted. Passerines and stuck-doves are mostly trapped by the youths, either around rivulets (*maschuya*), or on trees that generally produce yellow or red fruits, or flowers, from March to mid-May. Larger birds such as the toucan are shot with crossbows while other migratory and grallotory birds (*kwale/bi*, *nkang/bi*) are trapped with snares.

Reptiles are not hunted in any particular manner. Most often, they are encountered with in the bush or near the trunk of a dead tree during a hunting expedition or when clearing the bush. Some are also caught by chance with traps with or without bait. Their meat is very much appreciated by the Bakola, and some, like the viper, are reserved for the elders. Table 3 shows the various birds and reptiles captured and consumed by the Bakola.

Table 2. List of Trapped Animals.

	Vernacular name	Latin name	English name
Frequent	<i>likun/bi</i>	<i>Cephalophus monticola</i>	blue duiker
	<i>lekeno</i>	<i>C. dorsalis</i>	bay duiker
	<i>mbindi/ba</i>	<i>C. callipygus</i>	Peter's duiker
	<i>zibo/ba</i>	<i>C. sylvicultor</i>	yellow-backed duiker
	<i>ngumbo/ba</i>	<i>Atherurus africanus</i>	brush-tailed porcupine
	<i>ku/ba</i>	<i>Cricetomys</i> sp.	giant pouched rat
	<i>djue/bi</i>		a species of antelope
	<i>sindi/bi</i>		squirrel
	<i>mbpa/ba</i>		squirrel
Occasional	<i>mbpoer/ba</i>		squirrel
	<i>mveke/be</i>		hedgehog
	<i>nzue</i>	<i>Neotragus batesi</i>	Bate's antelope
	<i>mwa</i>	<i>Cephalophus ogilbyi</i>	Ogilby's duiker
	<i>esunga</i>	<i>Felis aurata</i>	golden cat
	<i>giabo</i>	<i>Viverra civetta</i>	civet
	<i>nzaele/ba</i>	<i>Phataginus tricuspis</i>	tree pangolin
	<i>levembo</i>	<i>Miopithecus ougouensis</i>	talapoin
	<i>zombo/ba</i>	<i>Sylvicapra grimmia?</i>	bush duiker?
Rare	<i>nsin</i>		bush cat?
	<i>ngu/ba</i>	<i>Potamochoerus porcus</i>	bushpig
	<i>nyate</i>	<i>Syncerus caffer nanus</i>	forest buffalo (disappeared)
	<i>ndze</i>	<i>Panthera pardus</i>	leopard
	<i>wololo/ba</i>	<i>Dendrohyrax dorsalis</i>	tree hyrax
	<i>vimo/be</i>	<i>Smutsia gigantea</i>	giant pangolin
	<i>bonde</i>	<i>Cercopithecus cephus</i>	moustached monkey
	<i>yembo/ba</i>	<i>C. sp.</i>	a species of guenon
	<i>bonde/bi</i>	<i>Colobus satanus</i>	black colobus
	<i>ndziye</i>	<i>Gorilla gorilla</i>	gorilla
	<i>wa`a</i>	<i>Pan troglodytes</i>	chimpanzee
	<i>ven</i>		a species of antelope
	<i>nzingi</i>		galago
	<i>nkang</i>		unidentified bird

Table 3. Birds and Reptiles Caught and Eaten.

	Vernacular name	Latin name	English name
Frequent	<i>sueli/bi</i>		sparrow
	<i>luer/bi</i>		shrike
	<i>mbinda/ba</i>		a species of passerine
	<i>bvang</i>		hornbill
	<i>yili/ma</i>	<i>Bitis gabonica</i>	Gabon viper
	<i>pfu`u</i>		grass snake
Occasional	<i>pebo/ma</i>		pigeon
	<i>kwale/bi</i>		partridge
	<i>dubo</i>	<i>Streptopelia</i> sp.	turtle-dove
	<i>nkang/mi</i>		unidentified
	<i>mbwamo</i>	<i>Python sabae</i>	African python
Rare	<i>lang/ma</i>	<i>Deudroaspis viridis</i>	yellow mamba
	<i>pfundoer</i>		blue-feathered running bird
	<i>ngombi</i>	<i>Varanus niloticus</i>	Nile monitor
	<i>gye</i>		water snake

(2) *Net hunting*

Whereas trapping takes place most intensively during the long rainy season, net hunting is mainly carried out in the dry season, from mid-November to mid-March, when the weather is good and there is no risk of spoiling the nets with rain. It is at this period that each Nkola takes out his net (*wado*) that had been “forgotten” in the corner of a hut. The broken parts are repaired; and some people add to their nets by a few meters. Most of other activities (trapping, farm work, etc.) are henceforth neglected for a while. Men, women and children prepare for the great joyful moment of abundance of game meat. In effect, net hunting is a collective attempt and provides them with plenty of game.

As Bahuchet (1985) noted on the Aka in Central African Republic, “the dry season is mostly devoted to great collective net hunting expeditions, while the rainy season is the time for spear hunting, trapping, etc.” It is also this time of great net hunting that provides the Bakola with an opportunity of getting together at a larger camp. In fact, for this collective hunting to be truly efficient, the participation of a large number of hunters (men with nets, women and children to beat the forest and to carry the game) is necessary.

The Bakola practice three types of net hunting: a small-scale hunting at the level of a family circle (father, mother, children and the in-laws), a more extended one bringing together all the families of the same camp with at least twenty to thirty inhabitants; and a much larger-sized one in preparation for major feasts (for funeral and marriage ceremonies, and other major festival occasions), that brings together two to three camps of approximately sixty persons⁽¹⁾.

Net hunting requires not only the participation of men, women, and forest animals, but also and above all “spirits” (*minkugi*) that protect the forest and the Bakola and provide them with game. The hunting carried out by two

Table 4. Animals Caught with the Net.

	Vernacular name	Latin name	English name
Frequent	<i>likun/bi</i>	<i>Cephalophus monticola</i>	blue duiker
	<i>lekeno/ma</i>	<i>C. dorsalis</i>	bay duiker
	<i>mbindi/ba</i>	<i>C. callipygus</i>	Peter's duiker
	<i>zibo/ba</i>	<i>C. sylvicultor</i>	yellow-backed duiker
	<i>ngumbo/ba</i>	<i>Atherurus africanus</i>	brush-tailed porcupine
	<i>djue/bi</i>		a species of antelope
Occasional	<i>mveke/be</i>		hedgehog
	<i>ku/ba</i>	<i>Cricetomys</i> sp.	giant pouched rat
	<i>esunga</i>	<i>Felis aurata</i>	golden cat
	<i>giabo</i>	<i>Viverra civetta</i>	civet
	<i>nzaele/ba</i>	<i>Phataginus tricuspis</i>	tree pangolin
Rare	<i>vimo/be</i>	<i>Smutsia gigantea</i>	giant pangolin
	<i>ngu/ba</i>	<i>Potamochoerus porcus</i>	bushpig
	<i>ndze/ba</i>	<i>Panthera pardus</i>	leopard
	<i>wa`a</i>	<i>Pan troglodytes</i>	chimpanzee
	<i>ndziye</i>	<i>Gorilla gorilla</i>	gorilla

to three camps totalling dozens of persons is an important social as well as cultural event. The means for it should not to be neglected nor selected haphazardly. The Bakola thus work seriously and meticulously to ensure its success. This great collective hunting takes place mostly during the long dry season. Below is a list of the animals caught with net hunting. Net hunting provide the Bakola with more game meat than other hunting methods. It is often the case that the Bakola return to the camp empty-handed after visiting twenty to thirty traps, but it is rare to return with an empty bag from two successive net hunting attempts in the forest.

(3) *Cross-bow (mbanzi)*

Hunting with a cross-bow seems to have been borrowed from the Mvae and other Bantu groups. It is an individual attempt, but is almost extinct among these groups, and the Bakola have also been more solicited to hunt with guns by civil servants, retired workers and holidaymakers in these areas. The success in cross-bow hunting depends mostly on the hunter's ability to get close to the target animals in silence without being noticed. Bakola mainly used to have hunted with a cross-bow arboreal animals, such as larger birds, squirrels, spotted palm-civets, monkeys, but duikers may have been hunted as well.

II. Gathering (*minkiukwa*)

This activity is reserved mostly for women and children and is carried out throughout the year, as well as during the hunting and fishing expeditions, on the way to and from farm works, and even during leisure trips in the forest.

1. *Tools for Gathering*

The tools used for gathering are numerous in kind, as any object that falls in the hands may be used for gathering. However, the important tools regularly used for gathering include machete, which functions at the same time as a weapon for killing animals, for plucking edible leaves, cutting wood, felling trees, clearing weeds, uprooting wild yams, extracting honey, etc. It is also used for making other tools and equipments (for making clubs for striking rodents, reptiles and other small animals); baskets for carrying all sorts of items (firewood, wild food such as fruits, vegetables, yams, game, etc.); ropes for binding, etc..

2. *Gathering Activity*

The gathering activity is mostly carried out haphazardly, since it is done without any particular social or ritual predisposition. However, most gathering activities are seasonal, reflecting the seasonality of forest products. For example, the Bakola usually would not go to dig wild yams in January when it is not the season. On the other hand, during the seasons of yams, mushrooms, caterpillars and various fruits, gathering is organized by women and their children (Joiris, 1994). From time to time, the husband also assist his wife in

the multiple tasks of gathering wild vegetable food.

The Bakola of Campo and the North West part of Akom II are heavily dependent on the forest products, and consequently on the climatic conditions in the area. Generally, the Bakola get a variety of wild food by gathering. It is carried out every day by women and children, either in the forest, along the tracks to the fields, or in the fields of the villagers and of their own. With baskets on their backs, machetes in their hands or in the basket, dogs in front of them, and their spears on the shoulders, they take off individually, or in groups of several persons, for searching forest food. Between two high seasons is the lean period, when gathering takes place haphazardly without following any particular direction. Special marks are left on the tracks which they have visited, to help others for better orientation in the forest, and to help the gatherers find their way back home in the afternoon, after 6 to 7 hours of an uninterrupted gathering work. With great care and rich knowledge of plants, the women easily find out yam stems, and other food plants, even in the thickly wooded environment.

In spite of much time spent gathering in the forest, the harvest is often meager, barely enough for a family's evening meal. They are engaged in the same chore in the following day, again for the small amount of food. Describing the manner in which gathering is done by the Aka of Lobaye region (Central African Republic), Bahuchet (1985) stated, "they carry along their basket, supported on their forehead by a tree-bark rope, a machete, and walk along multiple tracks in the forest. They abandon the tracks only when they come close to a known area with a tree bearing fruits, or interesting plants. Alert as they are, the women are quick to recognize climbers, yam stems, brede plants, production trees, etc., that can be found on their path. These products harvested in small quantities is wrapped in large Marantaceae leaves, the bundle tied with tiny climbers and the packet placed in the basket."

During certain seasons of important food like nuts of *Irvingia gabonensis* or wild yams (*Dioscorea* spp.), gathering is done in a different way. Women go very early in the morning to the *Irvingia* tree (*ndtough*), pick up and gather the

Table 5. Types of Wild Yams and Yam-like Tubers Collected.

	Vernacular name	Latin name
Major	<i>anluan, buala, sang, bissasse, pingie</i>	<i>Dioscorea mangelotiana</i>
	<i>nkumbo</i>	<i>D. burkilliana</i>
	<i>koala</i>	unidentified
	<i>nkande</i>	unidentified
	<i>nkong</i>	unidentified
Secondary	<i>lepale</i>	<i>D. bulbifera</i>
	<i>nlung</i>	<i>D. praehensilis</i>
	<i>nambonga</i>	unidentified
	<i>kah-kah</i>	unidentified
	<i>koni</i>	unidentified
	<i>ligiah</i>	unidentified
	<i>lebo`o</i>	unidentified
	<i>nakaka</i>	unidentified

fruits, and split them with a machete on the spot. The technique of splitting is very delicate and requires concentration and precision. The plucking of “bush mango (English for the *Irvingia* spp.)” fruits (*ndtough bozindi*) is generally done during the rainy season. The nuts are often so abundant that they are stored to be served in times of shortage as done by the Bantu neighbors, Mvae, Boulou and Kwassio. The Bakola are often engaged in several other occupations on the same day than gathering *Irvingia* nuts, and they usually gather the amount that are used in a few days.

For extracting nuts from the fruit of *Irvingia gabonensis*, they use an iron axe or a handle-less machete that are pinned in a piece of wood on the ground. The fruit is thus placed on the sharp edge and split by striking the fruit with a stick. Once the fruit is split into two parts, the cotyledons are extracted. The nuts are roasted and pounded, then used for making an oily condiment that is highly appreciated, especially for cooking with meat. The husband often takes part in the collecting and splitting the fruit.

There are number of wild food that are gathered by the Bakola, including various species of wild yams and other roots and tubers, fruit and nuts, leaf vegetables, mushrooms, honey and mollusks such as land and water snails.

3. Honey (*kwao*)

The honey season is one of the most marvelous periods in the Bakola life. It falls in the middle of the year, from May to August, when much of the forest flowers come into bloom. The Bakola very often abandon their hunting and agricultural activities in search of honey that they are extremely fond of and of which nutritional value is also important (Bahuchet, 1972).

Honey collecting is a dangerous and even perilous activity, but they pursue it because it is so attractive. Honey is collected either in a group or individually. The Bakola search natural hives in trees by examining the pieces of dead bees under a tree. If they find such pieces in the soil, they are likely to find bee's nest in the tree above it. Or, they search for the buzzing bees flying around the nests in a tree trunk (Cornet, 1982).

To collect honey, the Bakola use a variety of tools: a small L-shaped axe to cut open a nest in a tree trunks, rope of liana that is tied around the waist and the tree, a smoking tube used for fumigating the aggressive bees while cutting their nest, a honey container, made either of metal, plastic or plant materials (of tree-bark or Marantaceae leaves) to keep the precious liquid without losing a single drop.

Honey collection is sometimes done on the ground if the nest is located in a dead tree trunk lying on the ground, or when they fell down a honey-bearing tree. Some species of stingless bees (Trigonidae) make their nests underground. Collection of honey of honeybees is, however, more often done at a certain height. Its extraction high in a tree requires skill, as well as caution, tact, agility, patience and courage. The bees often sting the collector, but he does not seem to be bothered by it very much when cutting the nest open. The climber may use a rope that is bound around the waist and the tree trunk, and with

the aid of this rope he climbs the tree easily. They also use a nearby smaller tree that is easier to climb, before crossing over to the honey-bearing tree at a suitable branch. If the honey collector is alone, he has to do all these works by himself. Sometimes it takes a few hours. At the end of the collection, he drops the machete, axe and smoking tube on the ground. He then climbs down rapidly but carefully with the container slung over his shoulder, with the aid of a rope or flexible branch. As soon as he reaches the ground, he carefully places the container on the ground and starts removing the remaining honeybee stings from his skin, this time shouting loudly for the pains.

When they collect honey in a group, the collector first goes up the tree only with a machete and a smoking tube, while the rest of the tools (axe, container, etc.) are sent to him by those on the ground, using a long liana that is tied around the waist of the climber. The others on the ground are shouting cheers to the collector who, throughout his work, suffers from the stings of the wicked bees. At the end of his work, he throws the machete, axe and firebrand to the ground, before carefully descending the honey container with the liana. The others waiting on the ground receive the container with shouts of joy.

III. Fishing by the Bakola

Fishing is not practiced frequently by the Bakola. Despite the presence of several watercourses in the region, and regular contacts with the Yassa and Mabea fishermen on the coast, and with the Mvae and Boulou part-time fishermen working in the freshwater, fishing does not occupy major part of the Bakola life. It is mostly carried out by women and the young. The recently settled Bakola on the seashore between Lolabe III and Nlende-Dibe have begun to learn fishing in the sea and eat more seafood to supplement the meat that has become more difficult to obtain from the forest.

1. *Fishing Tools*

Since the Bakola are more familiar with freshwater fishing than maritime fishing, they use the following tools: the fishing rod (*nkiua/mi*), the line (*nsing*), hook (*nung/bi*), machete (*nkiuala/ma*), bait (*nzuana*), net (*wado/ma*). Younger Bakola use hoop nets (*la/ma*), while women use scoop (*kanda/ma*) and machete (*nkiuala/ma*) to dam the stream and bail the water, ground net (*ntende/mi*) and bait (of cassava or tuber).

2. *Fishing Techniques*

While fishing is not very important to the Bakola livelihood, their frequent contacts with Bantu farmers such as the Mvae, Mabea and Boulou have enriched the techniques they are using today. They mainly use five fishing methods: angling (*ngiuo*), fish bailing (*luer*), hoop net fishing (*la/ma*), fishing with baits or crab fishing (*da'a/ma'a*), roller fishing (*bama*, in which an angler is on the shore holding his fishing rod and throwing his hook as far as possible into the sea).

(1) *Angling (ngiuo)*

In a Bakola hut inhabited by young people, there are usually fishing rods hanging on the roofs. Fishing with a rod, hook and line is a one-man activity, but often carried out in a small group of two or three persons. Boys enjoy fishing mostly in nearby small streams, but it is never carried out as seriously as hunting.

(2) *Fish Bailing (luer)*

It is an activity carried out by a group of women and children. Traditionally, wooden scoops were used for bailing the water, but these are no longer found in the study area. They instead use used (often broken) metal or plastic plates, or large Marantaceae leaves or tree barks for bailing the water. In the dry season when the water recedes, they make dams in the watercourse, both upstream and downstream, in order to map out a fishing site. When this is done, they bail out the water from the site, and catch with hand, or with machete, small fish, crabs, shrimps, etc which remain in shallow pools. This can be repeated at other sites in the same stream or elsewhere. They usually destroy, either, totally or partially, the dams in order to let the water flow into the site again.

(3) *Hoop Net (la/ma)*

This is used by the young, but also by women, often individually. Only a few Bakola manage to buy hoop nets from the villagers, and they seldom use them. In the fifteen camps surveyed, only eight Bakola owned hoop nets (*kura ma la*); two women in Nazareth, one in Biyengue, one in Boussibilika, two in Ngoulo and two in Mebiah.

(4) *Crab Fishing (da'a/ma'a)*

Crabs are mainly caught in a group fishing carried out mostly at night. Baits (pieces of cassava) are attached to one end of a line and the other end is tied to a small shrub by the water. Crabs, shrimps and even some types of fish come to eat the bait. With the light of a bush-lamp or torch, the fisherman detects the crabs and other prey and strikes them with a machete or knife.



Fig. 3. Nkola boy coming back from fishing with a goliath frog. (Photographs by Ngima, 2001).

PERCEPTION AND ECONOMIC ROLE OF SUBSISTENCE TOOLS AND TECHNIQUES

A variety of tools and techniques used by the Bakola represent their entire life and culture (social organization, division of labor, trade, magico-religious activities, their cultural representations, etc.). For instance, a hunting net reminds a Nkola of a series of things and activities related to its manufacture, art of hunting, role played in the hunt, rituals performed, as well as the game meat and its trade that fosters intra- and inter-ethnic relationships. Many of these take actual forms only when these tools and techniques are used in the routinely practiced activities for procuring food in their daily life.

I. Tools

While all the tools are necessary for a variety of activities (hunting, gathering, farming, handicraft making, trade and barter), some are more important than others; some are more culturally loaded than others, in that they represent social and cultural meanings. I will describe some of these important tools.

Dogs are the Bakola's most faithful companion in the village, fields, camp, deep in the forest, and even at a nearby commercial centre. Though they are not well cared and are gangling, covered with fleas and wounds, with skeletal appearance and sometimes with a hairless part, the dogs are nonetheless the keeper of the camp, and above all a hunting "weapon" which the Bakola can not spare. Between the Bakola and the dogs, there is an everlasting union and friendship. Every dog belongs to a specific Nkola and remains with him forever. Killing the dog of a Nkola implies hating him, depriving him of having meat and threatening his very existence.

Most adult Bakola men own at least one dog. Dogs are found in all the camps of the coastal region where they receive similarly poor treatment. The owner calls for the dog only when they go hunting. Nevertheless, despite this apparent negligence, the Bakola hunters cannot live in their camps without



Fig. 4. A skeletal dog. In spite of its almost dying appearance, this dog is always ready to hunt. (Photographs by Ngima, 2001).

dogs. It is often said that a Nkola home without a dog is like a Bantu home without a machete. The Bakola believe that the dog can see witches, chase them away, and thus save the camp from evil spirits. The dog is one of the Bakola's "weapons." Successful hunting with the dogs provides the Bakola with animal protein, thereby facilitating interethnic exchange relationship and opening up new horizons of their social life, since the Bakola enter into market economy with the money they acquire from the meat trade.

2. *The Net (wado)*

The net is the main hunting tool of the Bakola of the coastal region. The abundance of several important medium-sized game species in the dense forest with poor visibility favors the use of nets for hunting. Nets are actually woven by elderly people in the camps, but manufactured through a long and difficult chain of works that involve children and the youths who collect the bark of a certain plant species (*sali*) in the forest, adults men and women who show the shrubs to the young, and twine the bark fibers into cords, which are then woven into nets. All the inhabitants of the camp take part in this complex manufacturing process of the nets in some or other ways, and the nets made in this way are jealously preserved. The net is thus a symbol of their culture and society.

In effect, the process of manufacturing of hunting nets by the Bakola shows a certain degree of social differentiation in their otherwise acephalous and egalitarian community. Each activity of making nets and net hunting has its specialists, apprentices and aides, such as collectors of materials, craft men to make nets, fortune tellers, hunters and beaters. In the hunting practice in particular, a clear division of labor takes place, and special importance is attached to the net hunting as exemplified by rituals performed before the hunt. The net thus symbolizes, even more than the dog, of abundant catch and the socio-economic relationships between the Bakola and their Bantu neighbors. The Bakola are so conscious of the nutritional, social, economic and cultural roles played by the net that the net receives great attention and delicate care, particularly in the beginning of the dry season (December to mid-March), when it is most intensively used. The rituals associated with the net performed before, during and after hunting exemplify its special importance to the Bakola life. While some tools used by the Bakola have implications for only a part of their life, such as social organization, division of labor, trade and other interethnic relationships, others like the net and the dog are related to the entire life of this small-scale society.

II. Techniques

1. *Hunting Techniques*

Of the seven techniques known and practiced by the Bakola, net hunting (*bwimo*) reflects par excellence the traditional community life of the Bakola of the coastal region. Net hunting is a collective attempt and requires close

cooperation among its participants. Bwimo, performed either by a family group, by a residential unit of several families, or by several residential units, employs all the physically competent participants of adult men, women and children. Each of these categories of persons knows his/her role to play in the hunt. There are also taboos linked to this type of hunting, which must be scrupulously respected in order to make the hunt successful. In the case of a net hunt organized by several residential groups in preparation for an important social event (funerals, installation of a village head, etc.), all the social categories (men, women and children), a variety of visible and secret societies (of hunters, forest and hunting spirits, fortune tellers, witch doctors) and other immaterial sensibilities (cooperation, compromise, security among men, taboos, and other beliefs) are mobilized for its realization and success. Activities related to their subsistence and other aspects of community life are thus realized through the combination of these individuals of different social categories and of originally different social and spiritual forces in a harmonious way.

During the months of net hunting, each hunter knows exactly what he has to do and respect for the success of the hunt. The fortuneteller, the bearer of the lucky fire, the hunter, the beater, the women and children, each in their precise domain, perform the duties assigned to them. But like in other domains of the camp life, this role differentiation is not rigid, nor exclusive, and the hunter can do the work of the woman or children who play a role as beaters in the hunt.

Net hunting provides the Bakola of the coastal region with about three quarters of their protein intake. Game caught by the net hunting are also exchanged with Bantu farmers for clothes and agricultural products, thereby creating and maintaining social relationships with them. More recently, they are sold to clients of a wider society, which has enabled the Bakola to venture into a mode of exchange other than the barter with their traditional partner. The introduction of money, and cash sale of the meat, in particular, into their society have imposed considerable influences on their life.

2. Symbolism of Hunting

Despite the deforestation caused by logging operations and by clearing of the forest for cultivation, hunting still remains the major subsistence activity of the Bakola, accounting for most of the men's working time in the forest. In spite of the changes in the traditional lifestyle and increasing importance of cultivation, hunting activities still occupy an important position in their life. A hunting expedition on a special occasion would never be interrupted by agricultural works or by gathering of wild food.

According to the Bakola, hunting in general, and net hunting in particular, is the basis of their identity. It is an activity without which they cease to be the "true Bakola," i.e., masters and connoisseurs of the wild fauna and flora. It has even been said that hunting is the body and soul of the Bakola. Most anthropologists studying on the Central African hunter-gatherers (so-called Pygmy groups) hold that attempting to stop them hunting or to settle them to change their *modus vivendi* (from hunters-gatherers to farmers, for instance) would be tantamount

to flouting the rights of already marginalized people, and to leading to the extinction of their unique culture based on the forest environment (Bahuchet, 1985).

Of all the forms of hunting, net hunting is the most important to the social representations of the Bakola of the coastal region. Especially important is the one organized during the long dry season (November to February) on ceremonial occasions, either for funeral ceremony, or marriage and other happy events, with participants from multiple residential units (Ngima, 1993). The Bakola perform such a hunt with magical and religious rituals, that are prohibited not only to the Bantu farmers but also to the Bakola women and the uninitiated.

he taboos concerning the net hunting include the prohibition from crossing over the nets set in the forest, and to make sexual intercourse during the entire period of hunting expedition which last as long as one to two months. Those who do not respect the "sacred" precepts of *minkouta* (God of the forest, hunting and healing) would kill almost nothing with their nets. By contrast, those who respect them enjoy a successful catch everyday as predicted by *minkouta* who is believed to control the kind and number of game to be killed by the hunters, and even the precise locations of the nets that catch the animals. Net hunting is therefore not an improvised or chancy attempt, unlike trapping and other type of hunting. It is regulated, normative and should consequently meet the endogenous and exogenous social needs that make up their unique culture.

The Bakola hardly eat starchy food (cassava or cocoyams) without meat, whether it is a rat, duiker, or brush-tailed porcupine. For the Bantu villagers, visiting a Nkola camp is almost synonymous to bringing back bushmeat. Most of the trades between the Bantu farmers and the Bakola take a form of exchange of bushmeat (of the Bakola) for starchy food or alcoholic drinks of the Bantu villagers. In the image of the local Bantu people, hunting is mostly assigned to the work of the Bakola.

If we take these situation into consideration, the program of the government and NGOs to let them settle down along the roads, change their lifestyle to depending more on farming than hunting, without any prior education, would not be successful, as this would demand them to abandon what is most dear to them, their unique culture dependent on the forest (Cheikh, 1961).

If such were the conception and representation of hunting of the Bakola, it would be appropriate to apply one law for the richer villagers and another for the poorer forest people. It may be better to develop the environment of the Bakola and that of the Bantu in two different ways. For the protection of the Bakola traditional lifestyle and their culture based on hunting, I think it appropriate to make a reserve of forest set aside for the Bakola, and another part of the forest to be developed for non-Bakola farmers.

3. *Gathering Techniques*

Honey collection (*nkwano*) is one of the most important traditional activities

that attract a large number of people to a forest camp. While it may be done either individually or in a small group, honey collection resembles net hunting in terms of its social, cultural and economic roles. Honey collection brings into play all the active social actors of a Bakola camp, where each actor plays his role so that the collector does not feel isolated from others and succeeds in his work. The skills of searching the honey, its discovery and collection are based on learning and handed down from father to son. Among the Bakola, honey is called "*ma nyo'o ma nzambe* (God's nectar, see, Bahuchet, 1972)." It is the most valued gathering product not only for its nutritional values and its medicinal or magical utilities, but also for its social significance. It is shared among individuals, households, and other families of the same camp, of different camps, and even distributed to non-Bakola Bantu villagers. It is also bartered or sold for cash in a wider economic and social context.

III. The Role of Women among the Bakola

Most African societies have a division of labor and social roles between men and women. Men are assigned hard duties like clearing the bush, felling down trees, constructing houses, hunting, maintaining cocoa and/or coffee plantations. The remaining works, such as planting and weeding the crop fields, harvesting, cooking, cleaning the house, and taking care of children are considered to be the work of women, or simply neglected by men because they are less laborious and less difficult. However, the Bakola have maintained their own ways and customs to organize the works, despite the frequent contacts with their Bantu neighbors. They have no prejudice about the division of labor in their society; women's participation is actually as important as men's in net hunting, honey collecting, fishing and farming .

In the Mabulo Bakola camp where I studied, the division of labor between men and women is not clearly defined. Generally, men are engaged more in hunting of all types, the search for and collection of honey, and other laborious works that require skills and power, whereas women and children spend their time on lighter works, such as gathering, fishing, planting grubbing, weeding, harvesting, cooking, nursing and childcare. In daily life, however, everybody does almost everything whenever necessary, and for any socio-cultural and economic activity. In effect, men assist women spontaneously in gathering plant food and taking care of their children. Young unmarried men have their own fields and often cook their own food in a hunting camp. Likewise, the Bakola women quite naturally take up so-called masculine activities (hunting, honey collection, construction of huts, felling of trees, etc.), and do them as properly as men. In the net hunting in particular, participation of women and children is absolutely necessary, and it does not take place without their effective participation.

Women perform particularly important roles in certain cultural activities, such as dancing, funeral services, and organizing a great hunt for ceremonial occasions. The absence of women could be a reason for canceling such

activities. In the Bakola traditional dance known as *mpea* (plural *bapea*), women sing lively in chorus to animate other participants, and urge and galvanize the young. They sing, dance and beat the drum like men, until the main dancers get to the arena. Those who are not familiar with this style of show simply take the women as the main actors and admire them.

There is even a competition among some women to be distinguished from others concerning the so-called masculine activities. It is commonly heard that such and such women hunt, climbs fell trees or dance like men. Their contribution to socio-economic activities is thus very important. In particular, their participation in hunting contributes to increasing the catch, and therefore to increasing the opportunity of contacts with the outside world through trade of meat and other hunting products. Bakola women are engaged in a variety of livelihood activities throughout the year. While most of the “masculine” activities are practiced on a seasonal and temporary basis, and limited to a small number of activities, those reserved for women are daily, continuous and more diversified.

CONCLUSION

While the Bakola employ a variety of hunting, gathering and fishing techniques for their subsistence, these are not so effective as to provide them with a sufficient amount of surplus in meat and other forest products, hence need to be improved in order to obtain better outputs. The ineffectiveness and limited number of their traditional tools used for procuring forest resources, coupled with the lack of their proper maintenance, considerably reduces the efficiency of procuring forest products. To the Bakola, having enough number of nets for hunting is almost synonymous to having bushmeat in the evening. If one sees a number of nets hung on the fence or at the veranda of a house, it will call to his mind the abundance of game meat in that camp. But sufficient amounts of tools and manpower should be accompanied with appropriate techniques, without which the output would remain low and insufficient, in spite of the wealth of the forest, the rich faunal and floral resources.

Food procurement and production by the Bakola often become insufficient and famine creeps into the community from time to time. The Bakola, like the Baka in southeastern Cameroon, have noticed the decrepitude of their tools and the poor performance of their acquisition and production techniques to feed themselves or others. This is one of the reasons for their stay close to Bantu farmers and their fields, and for their dependence on the villagers to whom they refer as “my boss,” or “my villager” (*mi nwang* in Bakola language).

While they are aware of the need to improve their tools and techniques in order to feed themselves as efficiently as their Bantu neighbors, and of the role to be played by them in order to gain freedom and become independent from the villagers, the Cameroon people in general, including the Bakola themselves, still maintain the same state and are inclined to work and spend

their energy on behalf of the villagers, rather than for the Bakola. The meager reward the Bakola receive in kind or in cash from the Bantu villagers makes them disincentive to development, and leaves them on a wait-and-see situation. The villagers and other outsiders further complicate such an inactive spirit of the Bakola, and try instead to make their traditional hunting and gathering techniques perfect.

NOTE

- (1) It is the case of the following camps visited in April-May 1999, 2000 and 2002: Nazareth (10 inhts), Bouandjo (30 inhts), Biyengue (30 inhts), Bibira (15 inhts), Mimbosso (20 inhts), Boussibilika (20 inhts), Ngoulo (38 inhts) Bissono (26 inhts), and Mabaih (30 inhts).

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